SERVICE MANUAL
SIMPSON 460
Digital VOM

Simpson
INSTRUMENTS THAT STAY ACCURATE

SERVICE

BULLETIN #1-72

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III

CALIBRATION AND TEST PROCEDURES

MODEL 460 DIGITAL VOLT-OHM-MILLIAMMETER

ATTENTION SERVICE PERSONNEL

All tables in this bulletin that contain "Readout Tolerances" indicate the limits to which the serviceman should make his adjustments and are not to be given to the Customer. These tolerances are tighter than the advertised specs and are to be used for calibration to assure the finished repair being well within the advertised specification to the Customer.

DIVISION OF AMERICAN GAGE & MACHINE CO. • A KATY INDUSTRIES, INC. Subsidiary

CALIBRATION AND TEST PROCEDURES

MODEL 460 DIGITAL VOLT-OHM-MILLIAMMETER

I. GENERAL:

The following Test Procedures can be performed as an overall check on the Model 460 Digital Volt-Ohm-Milliammeter.

The operator should use CAUTION when testing the unit with HIGH VOLTAGES since these voltages can appear in unexpected places if a malfunction occurs.

I. TEST EQUIPMENT REQUIRED:

1. AC/DC Differential Voltmeter Standard, such as the Hewlett-Packard Model 741B, or finely adjustable DC power supply with differential voltmeter having the accuracy of the Model 741B.

2. Digital voltmeter (DVM), such as the Simpson Model 2700.

3. Wide range oscillator, such as the Hewlett-Packard Model 200CD.

4. Oscilloscope with a minimum bandwidth of 250 kHz.

5. Decade resistor box or selected 0.1% resistors having values as shown in Table III.

6. DC Power Supply having an adjustable output of 0-36 volts at 1.5 amperes.

7. Electronic Counter, such as Simpson Model 2725.

8. Power amplifier, such as the Bogen Model MO 100A.

9. Transformer with the following basic specifications:

   a. Frequency response from 100 Hz to 20 kHz.

   b. Capable of supplying 2.5 volts at 1 ampere for a primary potential of 115 volts maximum.

   c. Capable of supplying the following secondary voltages for a maximum primary source potential of 115 volts. 200 mV, 2 volts, 20 volts, 200 volts, 1000 volts.

III. PRELIMINARY STEPS:

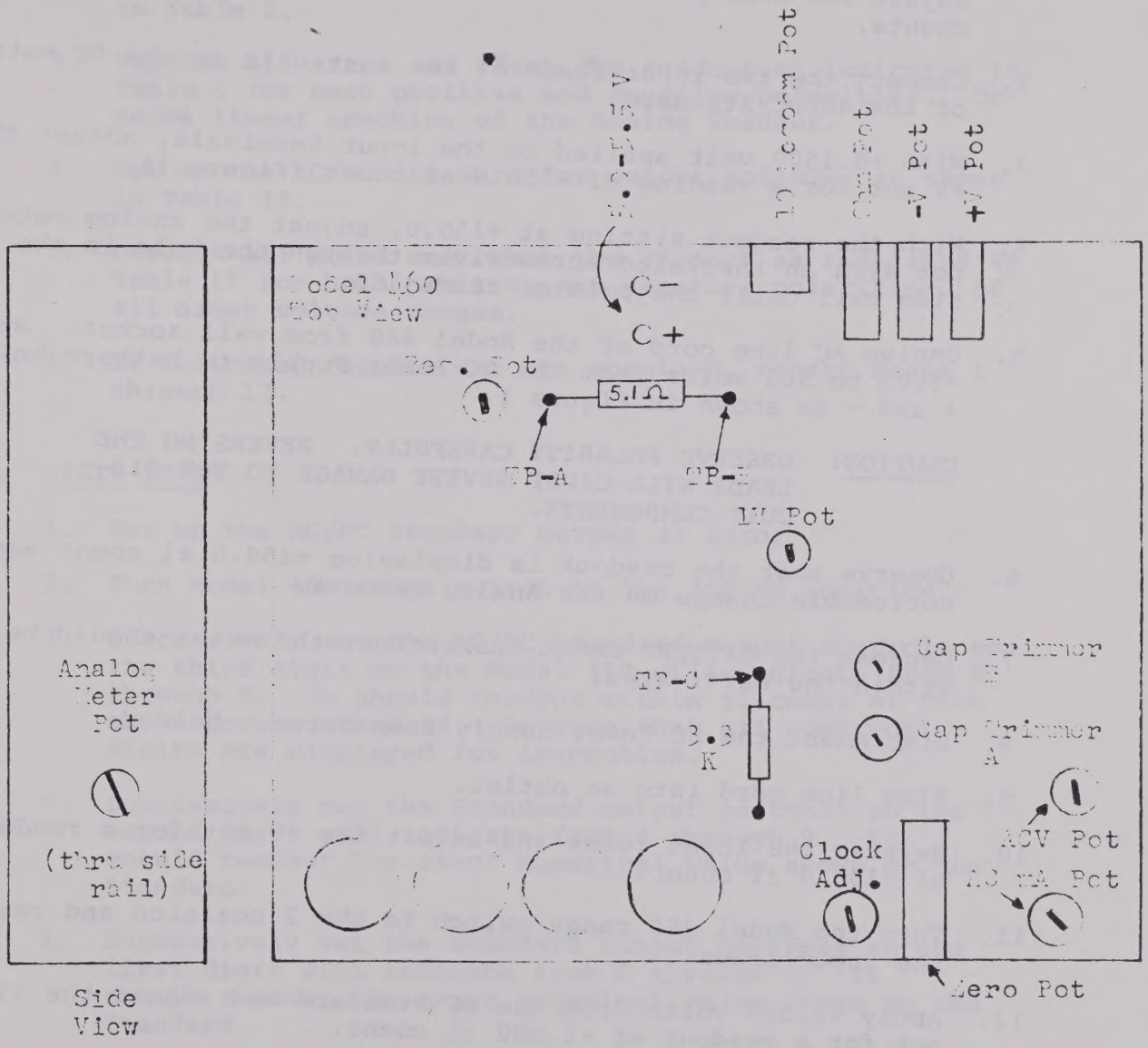
1. Connect all test equipment as shown in Figure 2.
2. Set the DC Standard for 0.15 volt output and allow to warm up for at least 30 minutes.
3. Set the Digital Voltmeter for measurements on the 10 volt range.
4. Set the Electronic Counter for measurement of 40 kHz ±100 Hz.
5. Model 460 to be tested should be set up as follows:
   a. Function switch to OFF position.
   b. Range switch to 200 mV position.
   c. Batteries removed.

IV. INITIAL ADJUSTMENTS & BATTERY CHARGER CHECK:

1. Connect the positive lead of the DVM to TP-A (Figure 1).
2. Turn the Model 460 function switch to DCV position. All readout tubes should illuminate.
3. Adjust the REG POT until the DVM reads 8.000 ±0.01 volt.
4. Measure TP-B with the DVM. The reading should indicate a voltage between +4.75 to +5.45 volts.
5. Press battery slide switch.
6. Voltage reading should increase from the value in Step 4 to a potential between 5.6 and 6.5 volts.
7. If outside the limits specified in Step 6, check components in battery charging circuit.
8. Connect the Electronic Counter lead to clock output at TP-C.
9. Adjust the CLOCK ADJ pot until the Electronic Counter reads 40 kHz ±100 Hz.
10. Remove all input leads of both the DVM and Electronic Counter from the Model 460 circuit.

Figure 1

TEST POINTS AND COMPONENT IDENTIFICATION



NOTE: Use insulated screwdriver for all AC adjustments.

V. ZERO ADJUST AND DC VOLT CALIBRATION:

1. With the V-OHM and COMMON terminals of the test unit shorted, adjust the ZERO pot on the front panel for a reading of ±00.0 counts.

2. Connect the two input leads of the test unit to the DC output of the AC/DC Standard.

3. With +0.1500 volt applied to the input terminals, adjust the +V pot for a reading of +150.0 ±1 count (Figure 1).

4. With the readout sitting at +150.0, adjust the analog meter pot with an insulated screwdriver through the hole in the side rail until the pointer reads 150.

5. Unplug AC line cord of the Model 460 from wall socket. Apply +5.05 to 5.5 volts from the DC Power Supply to battery holder + and - as shown in Figure 1.

   CAUTION: OBSERVE POLARITY CAREFULLY. REVERSING THE LEADS WILL CAUSE SEVERE DAMAGE TO THE CIRCUIT COMPONENTS.

6. Observe that the readout is displaying +150.0 ±1 count and no noticeable change on the Analog Readout.

7. Depress the BATTERY CHECK pushbutton; the meter should be well within the BATT. area.

8. Disconnect the DC Power Supply from battery holder.

9. Plug line cord into an outlet.

10. Reverse the input leads and adjust the -V pot for a readout of -150.0 ±1 count.

11. Turn the Model 460 range switch to the 2 position and reverse the input leads.

12. Apply +1.500 volts from the DC Standard and adjust the 1V pot for a readout of +1.500 ±1 count.

13. Short the input leads and rotate the range switch from the 200 mV to the 1000V range through each of the ranges. Observe the reading of each range respectively as follows: 00.0 ±1, .000 ±1, and 000 ±1.

14. Repeat Steps 1 through 13 if improper results are obtained.

VI. DC VOLT LINEARITY TEST:

1. Turn the Model 460 range switch to the 200 mV position.
2. Set up the AC/DC Standard for output voltages as shown in Table I.
3. Perform all steps and check the readout as indicated in Table I for both positive and negative polarities. Observe linear tracking of the Analog Readout.
4. Set up the AC/DC Standard for output voltages as shown in Table II.
5. Perform all steps and check the readout as indicated in Table II for both positive and negative polarities, of all other voltage ranges.
6. If indicated results are not obtained, repeat Steps 1 through 13.

VII. DIGIT TEST:

1. Set up the AC/DC Standard output at zero.
2. Turn Model 460 range switch to the 200 mV position.
3. Successively set the AC/DC Standard output controls so the third digit on the Model 460 will indicate from 0 through 9. It should readout within ±1 count of that shown on the standard. Be sure that all numerical digits are displayed for inspection.
4. Successively set the Standard output controls so the second digit will indicate from 0 through 9. It should readout the exact numerical value shown on the Standard.
5. Successively set the Standard output controls so the first digit will indicate from 0 through 9. It should readout the exact numerical value shown on the Standard.
6. Set the Standard for zero output.
7. The DC Voltage Test is complete.

Figure 2

Model 460 DC Voltage Calibration

Test Connections

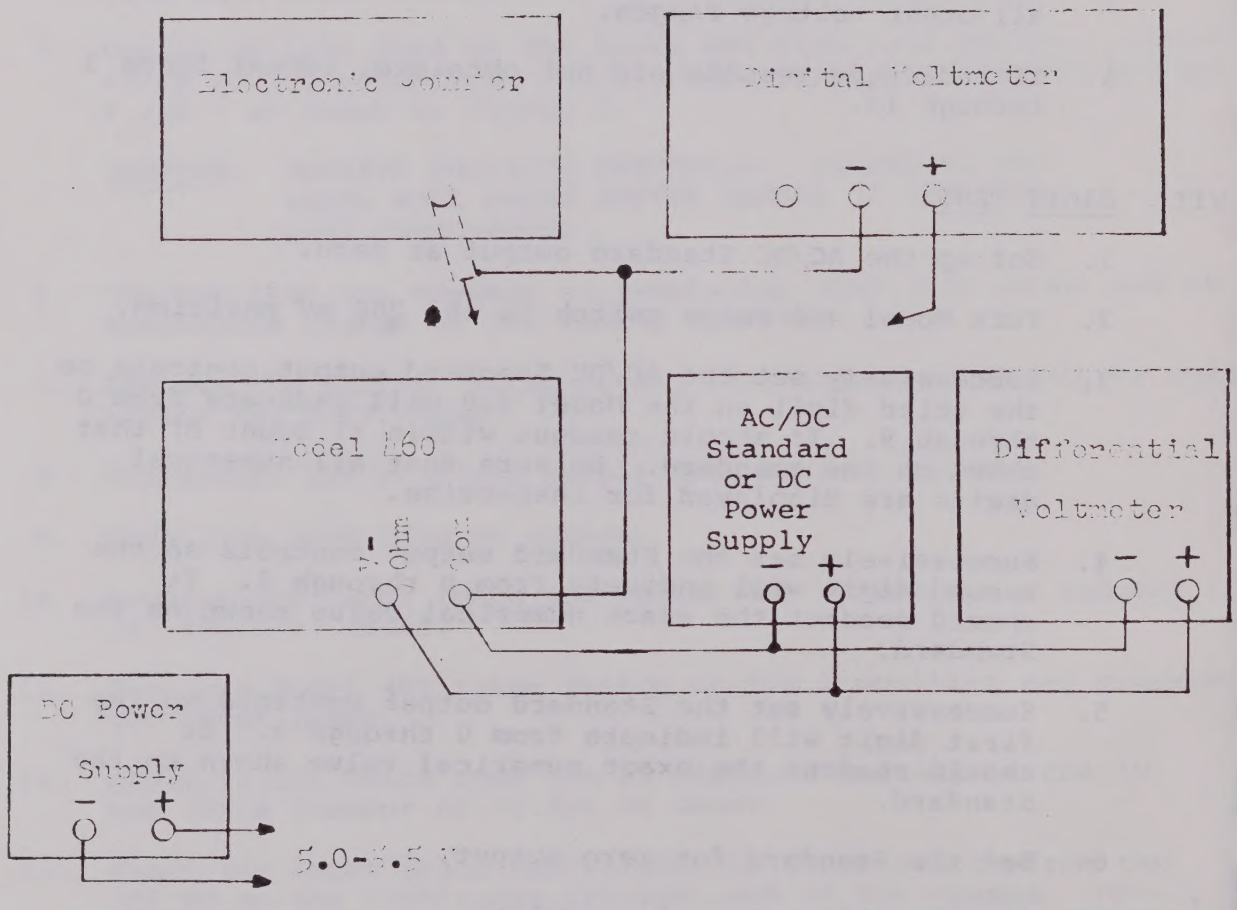


TABLE I

DC VOLT LINEARITY TEST - 200 MV RANGE

STEPS	AC/DC STANDARD OR DIFFERENTIAL VOLTMETER INDICATION	M-460 READOUT	M-460** ANALOG READOUT
1	.0000	00.0±1	0
2	.0100	10.0±1	10
3	.0300	30.0±1	30
4	.0500	50.0±1	50
5	.0700	70.0±1	70
6	.0900	90.0±1	90
7	.1000	100.0±1	100
8	.1200	120.0±1	120
9	.1400	140.0±1	140
10	.1600	160.0±1	160
11	.1800	180.0±2	180
12	.2000	*00.0±2	-----
13	.2300	*30.0±3	-----
14	.2500	*50.0±3	-----

* TOP HALF OF NUMERICAL 1 INDICATOR FLASHING.

** ACCURACY OF ANALOG READOUT IS ±½ of 1 DIVISION.

TABLE II

DC VOLT LINEARITY TEST

(2, 20, 200, and 1000 Volt Ranges)

STEPS	2V RANGE	20V RANGE	200V RANGE	1000V RANGE	M-460 READOUT
1	Short	Short	Short		000±1
2	0.500	05.00	050.0		500±1
3	1.000	10.00	100.0		1000±1
4	1.500	15.00	150.0		1500±2
5	1.900	19.00	190.0		1900±2
6	2.500	25.00	250.0		*500±3
				Short	000±1
				100.0	100±1
				300.0	300±1
				500.0	500±1
				700.0	700±1
				900.0	900±1

* TOP HALF NUMERICAL 1 INDICATOR FLASHING.

VIII. DC CURRENT ACCURACY TEST:

1. Connect all test equipment as shown in Figure 3 with resistor values as shown for R1 in Table III, available separately or connected in the circuit with an appropriate switch.

2. Select a resistor value for R2 as determined by the power supply output voltage limits.

3. Set the Model 460 function switch to the DCmA position.

4. Insert a resistor for R1 on each range as indicated in Table III and adjust the power supply output for indication on the DVM of the voltages shown for each step in Table III.

5. The Model 460 should readout as shown in Table III.

6. This check should be made for both polarities by reversing the leads at the Model 460 input.

IX. OHMS CALIBRATION:

1. Connect all test equipment as shown in Figure 4.

   NOTE: SHIELDED AND LOW RESISTANCE, SHORT TEST LEADS SHOULD BE USED.

2. Set the Model 460 function switch to the K OHMS position.

3. Set the Model 460 range switch to the 20 position.

4. Set the Decade Resistor to 15.00K OHMS. Adjust the Ohm pot (Figure 1) on the rear of the unit for a reading of 15.00 ±1. Observe that the ± sign is inhibited.

5. Short the Model 460 input leads and observe a readout of 000 ±1 count.

   NOTE: A HIGH COUNT COULD MEAN EXCESSIVE LEAD RESISTANCE.

6. Set range switch to 20 MEGOHMS position.

7. Connect a 10 Megohm ±0.1% resistor across the input leads. Adjust the 10 Megohm pot on rear for appropriate reading.

Figure 3

Model 460 DC Current

Test Connections

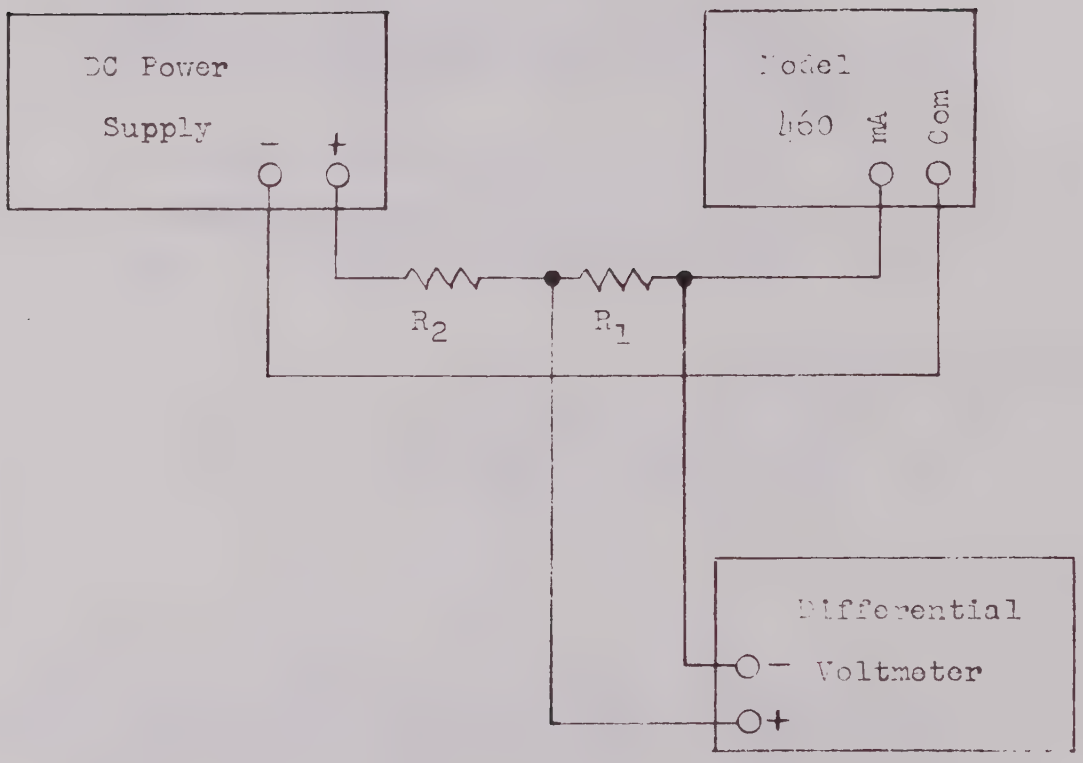


TABLE III

DC CURRENT ACCURACY TESTS

STEPS	DIFFERENTIAL VOLTMETER INDICATION (V)					** M-460 READOUT
	200 uA *R1 = 10,000 OHMS	2 MA *R1 = 1,000 OHMS	20 MA *R1 = 100 OHMS	200 MA *R1 = 10 OHMS	2 A *R1 = 1 OHM	
1	0.000	0.000	0.000	0.000	0.000	000±1
2	0.500	0.500	0.500	0.500	0.500	500±1
3	1.000	1.000	1.000	1.000	1.000	1000±2
4	1.500	1.500	1.500	1.500	1.500	1500±3
5	1.000	1.000	1.000	1.900	1.900	1900±4

* The values listed for R1 assumes that the differential voltmeter has negligible loading effect. If the instrument used has an input impedance of less than 100 Megohms, this resistor should be specially selected to eliminate errors. Each value combined with the input impedance of the instrument must have an accuracy of ±0.04% or better.

** This is the numerical readout. The decimal point should be present and positioned as required for the proper current readout value.

X. OHM ACCURACY TEST:

1. Connect all test equipment as shown in Figure 4.

2. Set the Model 460 function switch to the K OHMS position.

3. Set the resistor decade box for values as shown in Table IV.

4. Perform all steps and observe the readout of Table IV for all the indicated ranges. Observe the correct positioning of the decimal points. On the 200 Ohm range, lead resistance of the input cable should be subtracted from all readings.

5. If proper readout cannot be obtained, repeat Steps 1 through 7 (IX).

XI. AC VOLTAGE CALIBRATION AND ACCURACY TEST:

1. Connect all test equipment as shown in Figure 5.

2. Allow all test equipment to warm up for 30 minutes.

3. Turn the Model 460 function switch to ACV position.

   CAUTION: TURN THE COURSE AMPLITUDE CONTROL TO MINIMUM BEFORE EACH RANGE CHANGE.

4. Turn the Model 460 range switch to the 2 position.

5. Set the oscillator for an output of 1.500V, 200 Hz as read on the differential voltmeter. Adjust the ACV pot on the printed circuit board (Figure 1) for a readout of 1.500 ±1 count.

   NOTE: FOR ALL AC ADJUSTMENTS, AN INSULATED SCREWDRIVER MUST BE USED. SEE NOTE IN FIGURE 1. USE OSCILLOSCOPE AS MONITOR TO MAKE SURE THERE IS NO CLIPPING OR DISTORTION AFFECTING CALIBRATION.

6. Turn the range switch to the 600 VAC position.

7. Set the oscillator for an output of 600V, 200 Hz as read on the differential voltmeter. Remember this readout for Step 8.

Figure 4

MODEL 460 OHMS CALIBRATION

TEST CONNECTIONS

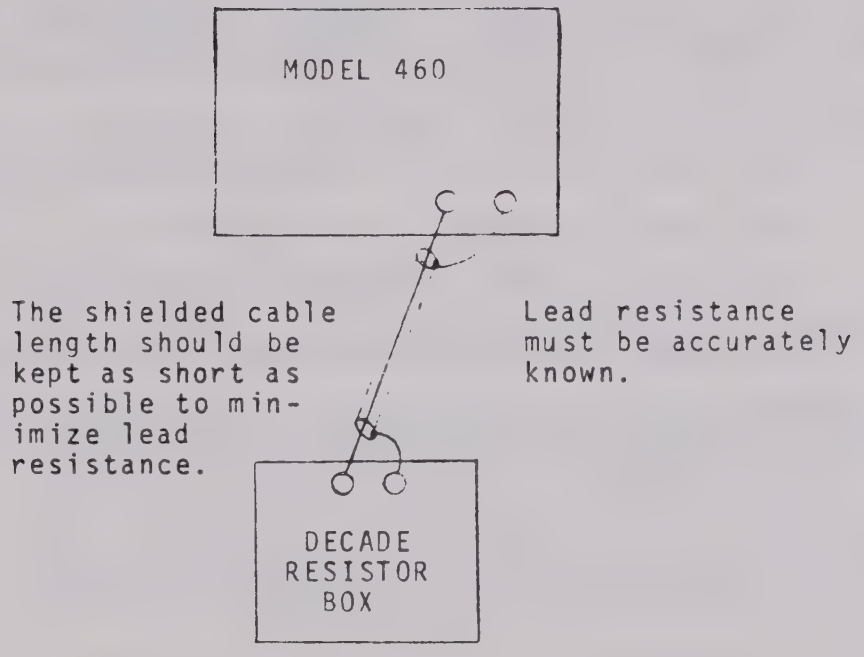

MODEL 460
The shielded cable length should be kept as short as possible to minimize lead resistance.
Lead resistance must be accurately known.
DECADE RESISTOR BOX

TABLE IV

OHMS TEST

STEPS	RESISTOR DECADE SETTINGS					M-4 READ
	200 Ohms Range	2K Ohms Range	20K Ohms Range	200K Ohms Range	1000K Ohms Range	
1	Short	Short	Short	Short	Short	000
2	30.0 Ohms	300 Ohms	3.0K Ohms	30K Ohms	300K Ohms	300
3	70.0 Ohms	700 Ohms	7.0K Ohms	70K Ohms	700K Ohms	700
4	140.0 Ohms	1.4K Ohms	14.0K Ohms	140K Ohms	1400K Ohms	1400
5	190.0 Ohms	1.9K Ohms	19.0K Ohms	190K Ohms	1900K Ohms	1900
6	250.0 Ohms	2.5K Ohms	25.0K Ohms	250K Ohms	2500K Ohms	*500

* TOP HALF OF NUMERICAL 1 FLASHING.

8. Set the oscillator for an output of 600V, 20 kHz as read on the differential voltmeter. Adjust capacitor trimmer A for the reading from Step 7, and then set the amplitude control for zero output.

9. Turn the Model 460 range switch to the 200 position.

10. Set the oscillator for an output of 150.0V, 200 Hz. Remember the readout of the Model 460.

11. Set the oscillator for an output of 150.0V, 20 kHz as read on the differential voltmeter. Adjust capacitor trimmer B on the printed circuit board for the readout of Step 10.

12. Perform all steps and observe readouts as shown in Table V for all AC voltage ranges. Observe the correct decimal positions.

XII. AC CURRENT CALIBRATION AND ACCURACY TEST:

1. Connect all test equipment as shown in Figure 6 with available resistor values as shown for R1 in Table VI.

   NOTE: THE R1 VALUE LISTED ASSUMES THAT THE DIFFERENTIAL VOLTMETER HAS NEGLIGIBLE LOADING EFFECT. IF THE INSTRUMENT USED HAS AN INPUT IMPEDANCE OF LESS THAN 100 MEGOHMS, THIS RESISTOR SHOULD BE SPECIFICALLY SELECTED TO ELIMINATE ERRORS. EACH VALUE COMBINED WITH THE INPUT IMPEDANCE OF THE INSTRUMENT MUST HAVE AN ACCURACY OF $\pm$0.04%.

2. Turn the Model 460 function switch to the ACmA position.

3. Set the Model 460 function switch to the 200 position and insert a 10 ohm resistor for R1.

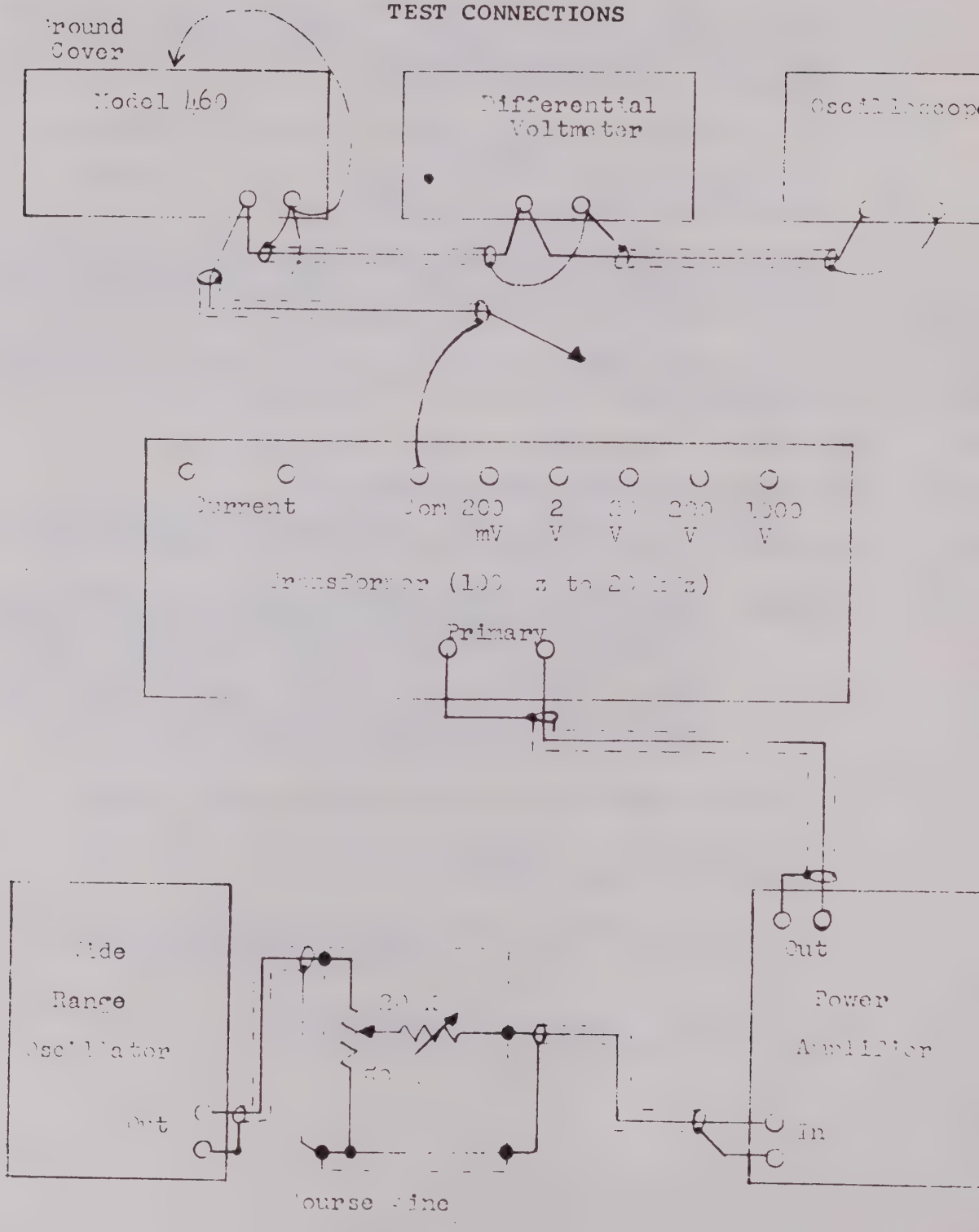
4. Set the oscillator output for an indication of 1.5V on the differential voltmeter. Adjust the ACmA potentiometer (Figure 1) for an indication of 150.0 $\pm$1 count.

5. Perform all steps and observe readouts as shown in Table VI. Observe correct decimal positions.

Figure 5

AC VOLTAGE MEASUREMENTS

TEST CONNECTIONS



Amplitude

TABLE V

AC VOLTS ACCURACY TEST

STEPS	M-460 RANGE POSITION	VOLTAGE ON DIFFERENTIAL	M-460 READOUT FOR 100 Hz SIGNALS	M-460 READOUT FOR 20 kHz SIGNALS
1		Short	00.0±1	00.0±1
2	200 mV	.0300	30.0±2	30.0±3
3		.1000	100.0±4	100.0±8
4		.1900	190.0±8	190.0±15
1		Short	.000±1	.000±1
2	2 V	0.300	.300±2	.300±3
3		1.000	1.000±4	1.000±8
4		1.900	1.900±8	1.900±15
1		Short	0.00±1	0.00±1
2	20 V	03.00	3.00±2	3.00±3
3		10.00	10.00±4	10.00±8
4		19.00	19.00±8	19.00±15
1		Short	00.0±1	00.0±1
2		030.0	30.0±2	30.0±3
3	200 V	100.0	100.0±4	100.0±8
4		190.0	190.0±8	190.0±15
1		Short	000±1	000±1
2		100.0	100±2	100±2
3	* 600 V	300.0	300±3	300±3
4		600.0	600±4	600±5

* MAXIMUM VOLTAGE

Figure 6

AC CURRENT MEASUREMENTS

TEST CONNECTIONS

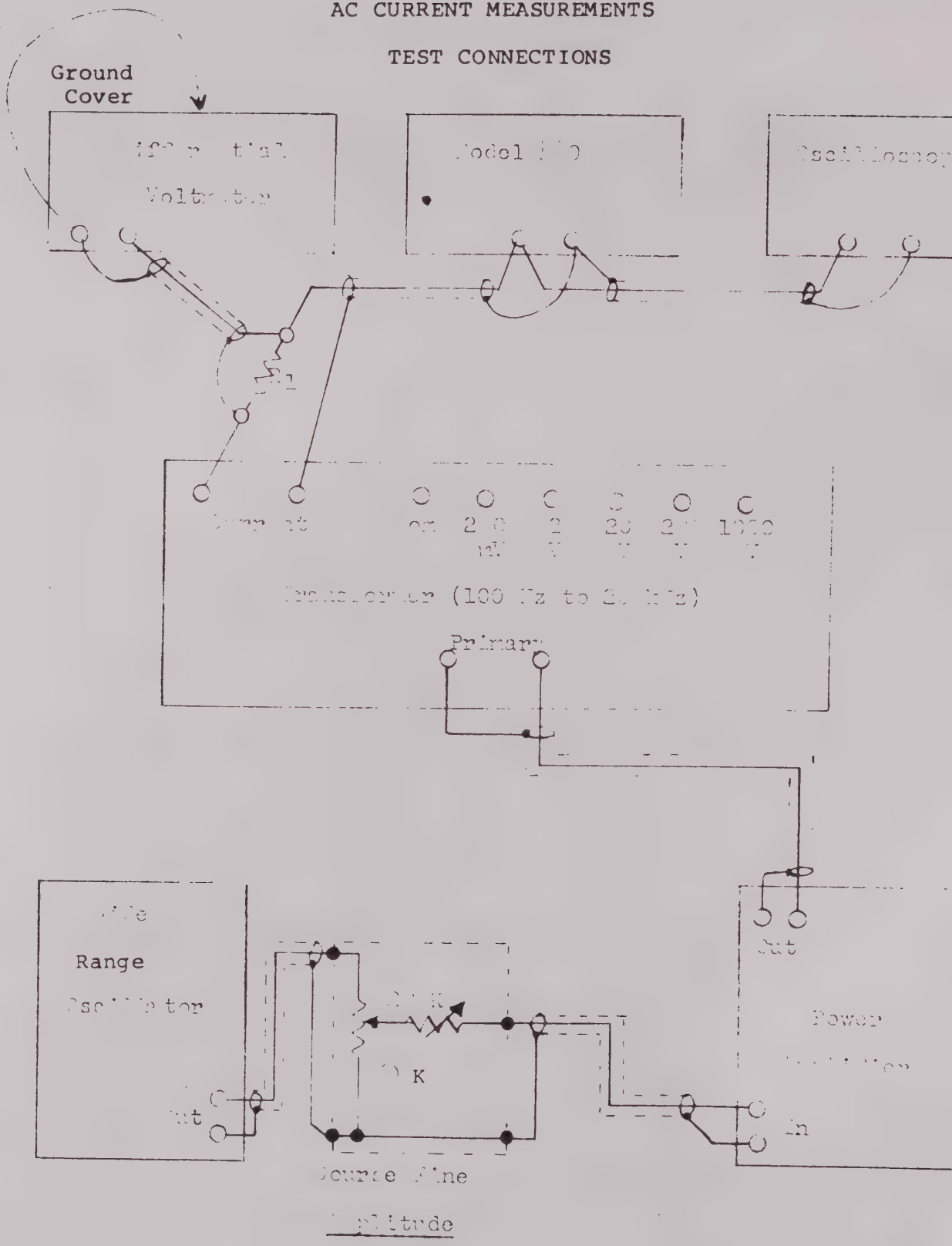


TABLE VI

AC CURRENT ACCURACY TEST

STEPS	M-460 RANGE POSITION	VALUE OF R1 *	AC VOLTAGE AS READ ON DIFFERENTIAL VOLTMETER	M-460 READOUT FOR 100 Hz AND 10 kHz SIGNALS
1			Short	00.0±1
2	200 μA	10,000 Ohms	0.800	80.0±4
3			1.800	180.0±8
1			Short	.000±1
2	2 MA	1000 Ohms	0.800	.800±4
3			1.800	1.800±8
1			Short	0.00±1
2	20 MA	100 Ohms	0.800	8.00±4
3			1.800	18.00±8
1			Short	00.0±1
2	200 MA	10 Ohms	0.800	80.0±4
3			1.800	180.0±8
1			Short	00.0±1
2	1000 MA	1 Ohm	0.800	800±6
3			1.000	1000±8

* The value listed for R1 assumes that the differential voltmeter has negligible loading effect. If the instrument used has an input impedance of less than 100 Megohms, this resistor should be specially selected to eliminate errors. Each value combined with the input impedance of the instrument must have an accuracy of ±0.04%.

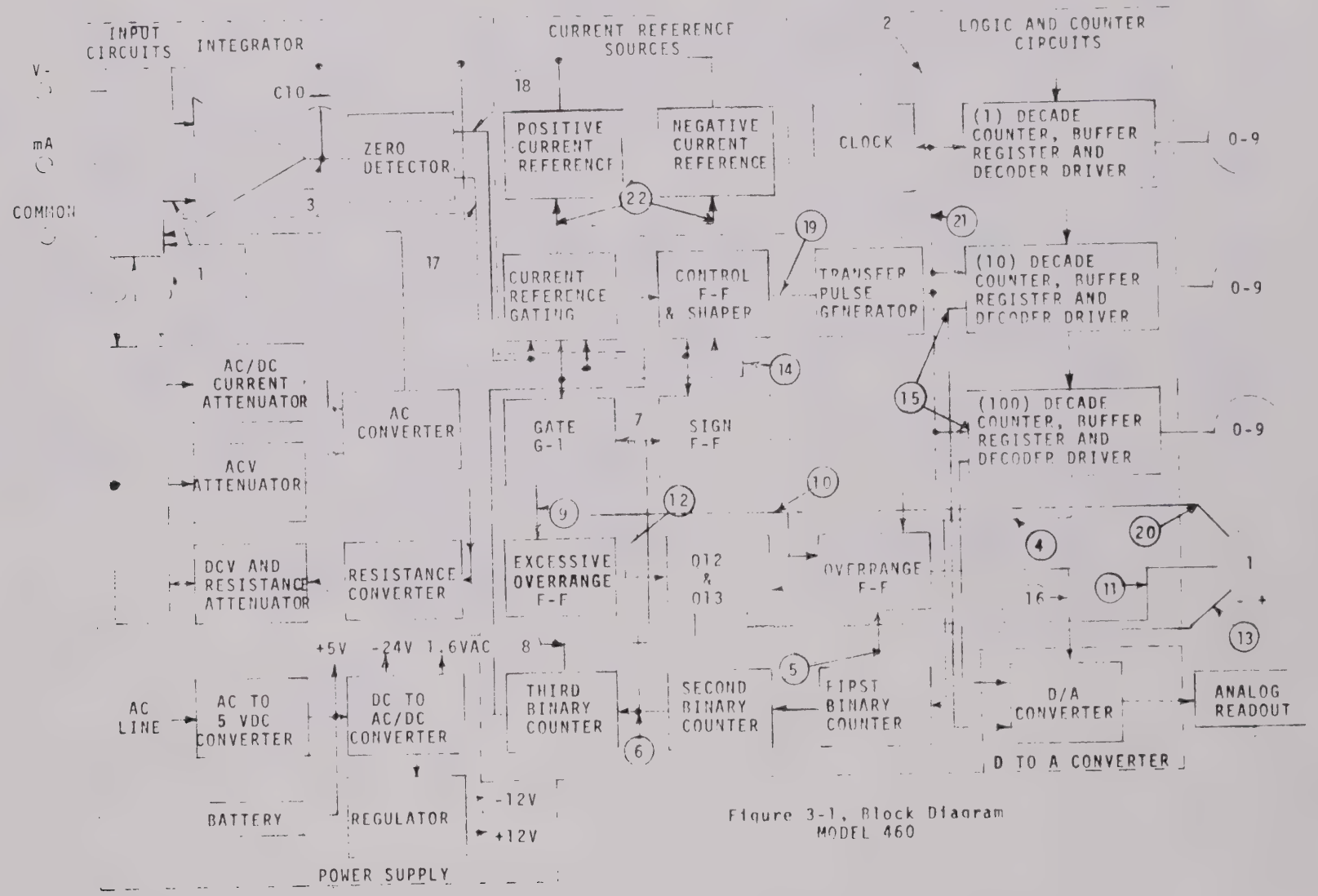


Figure 3-1, Block Diagram
MODEL 460

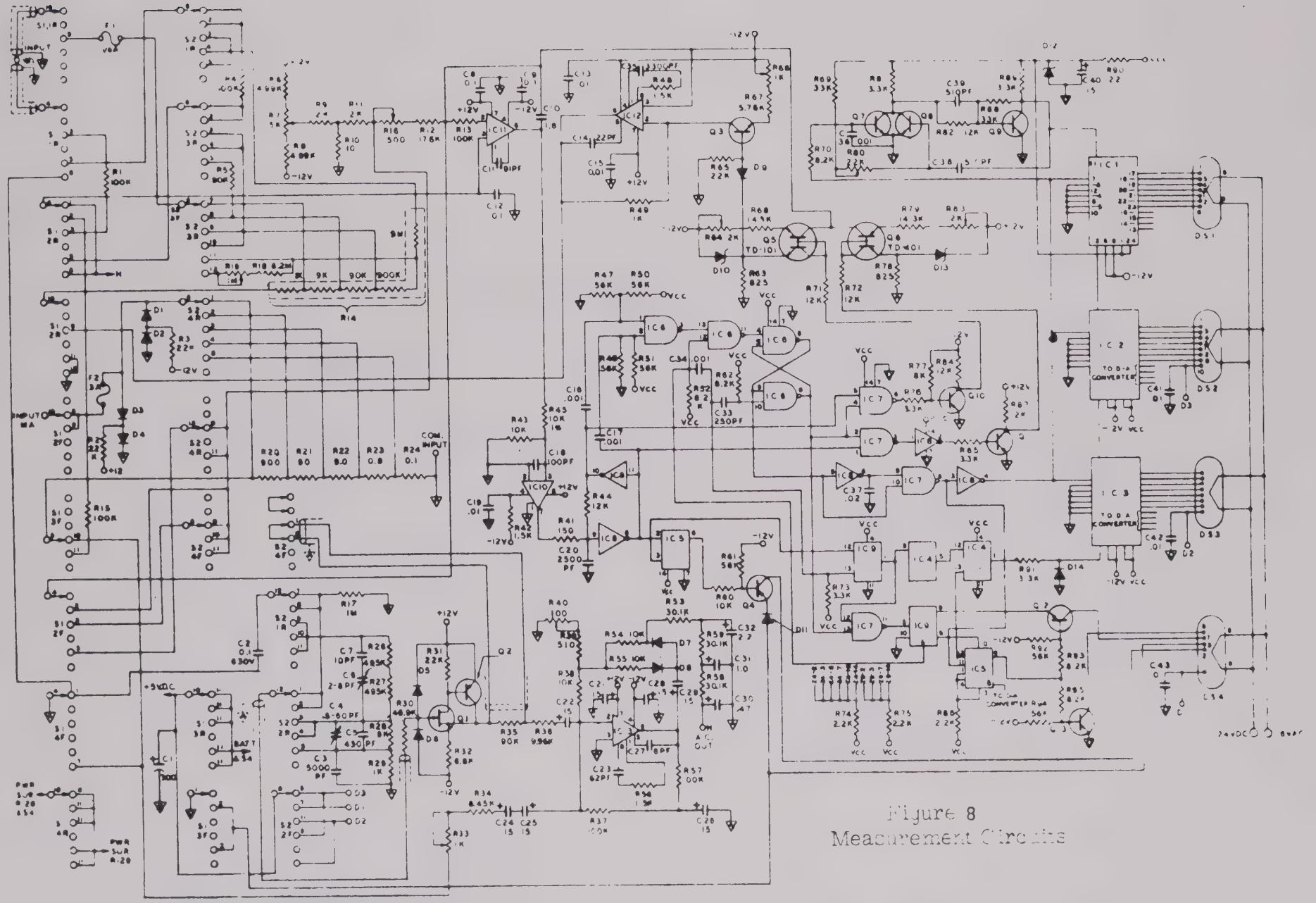
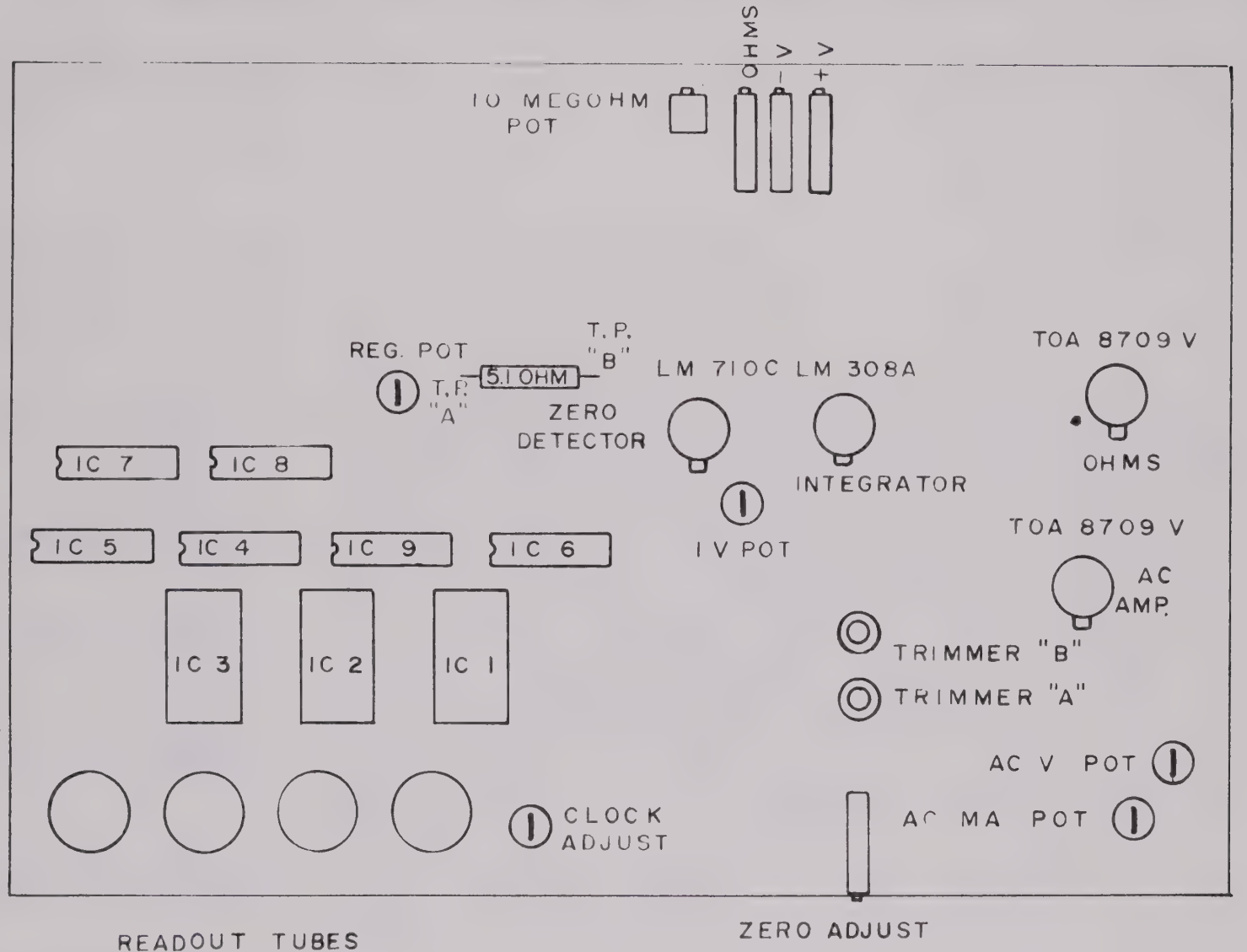


Figure 8
Measurement Circuits

MODEL 460 CALIBRATION CONTROLS



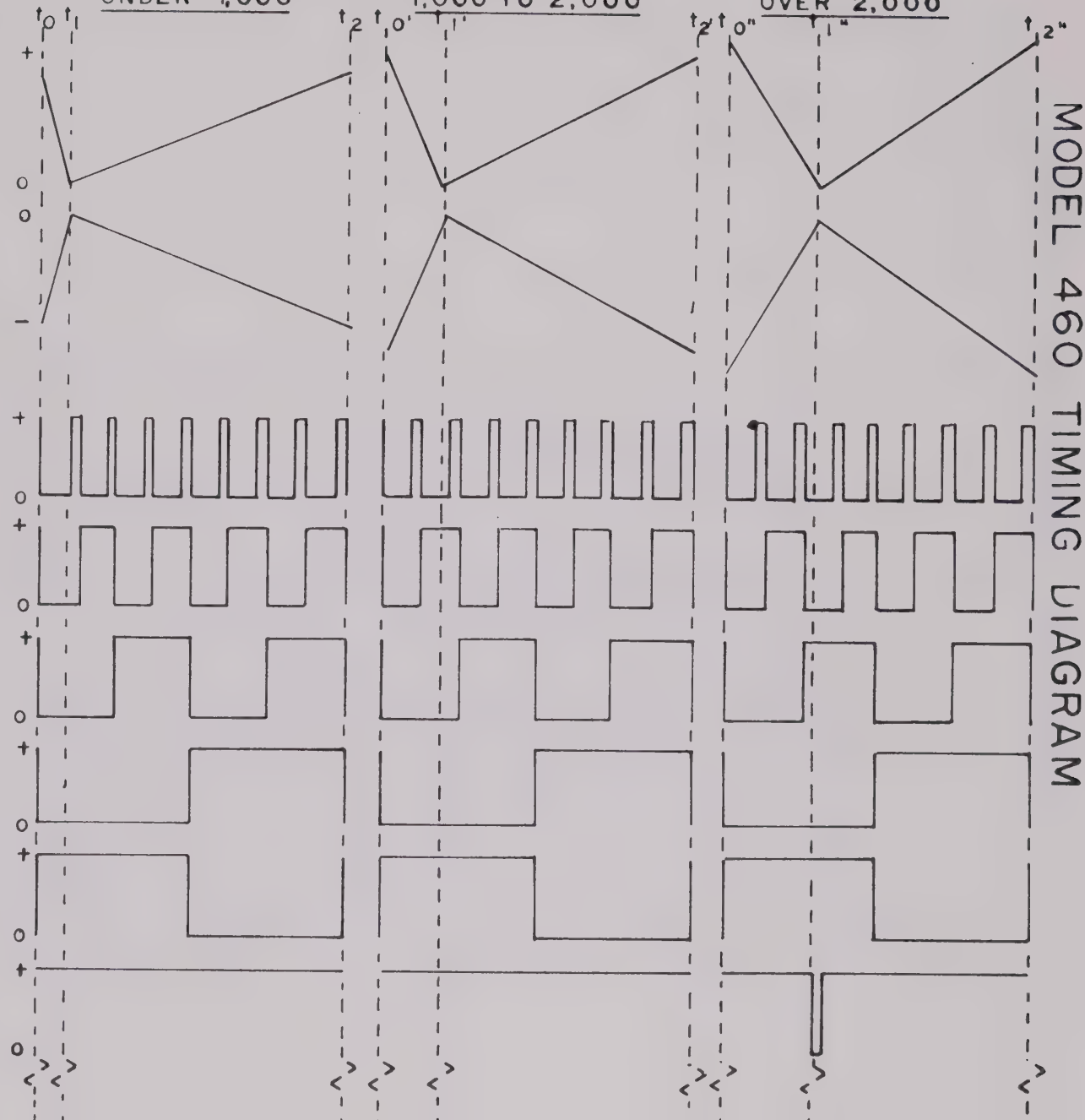
NOTES:
1. The Analog Meter Adjustment is accessible thru the left side rail.
2. Use an insulated screwdriver for all adjustments.

MODEL 460 TIMING DIAGRAM

COUNTS DISPLAYED

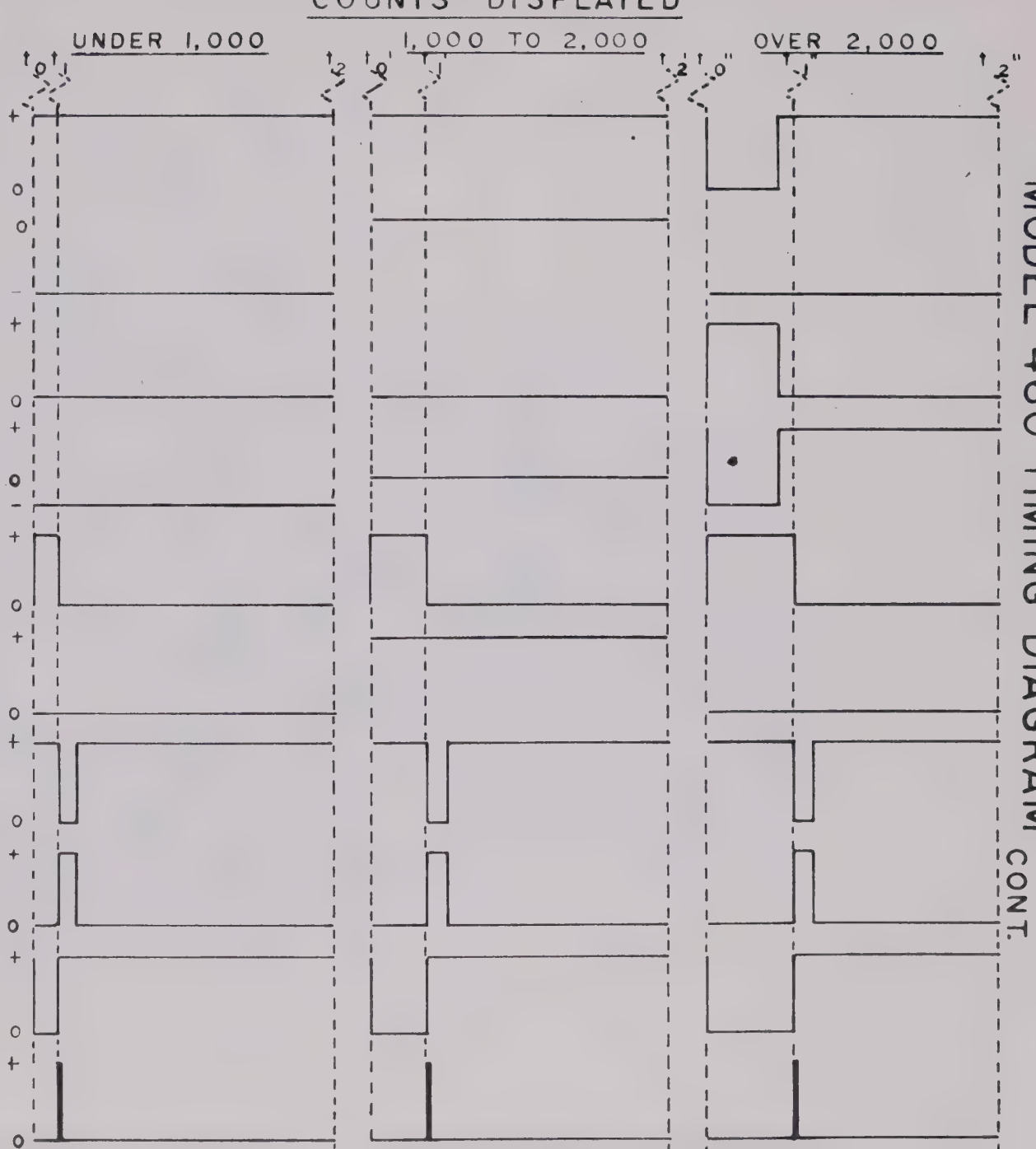
UNDER 1,000 | 1,000 TO 2,000 | OVER 2,000

BLOCK DIAGRAM NO.	LOCATION	DESCRIPTION
3 +IN	IC 11 PIN 6	INTEGRATOR
3 −IN	IC 11 PIN 6	INTEGRATOR
4	IC 4 PIN 1	FIRST BINARY COUNTER
5	IC 4 PIN 5	SECOND BINARY COUNTER
6	IC 9 PIN 1	THIRD BINARY COUNTER
7	IC 9 PIN 13	THIRD BINARY OUTPUT
8	IC 9 PIN 12	SIGN CONTROL
9	IC 9 PIN 5	OVERRANGE



MODEL 460 TIMING DIAGRAM CONT.

BLOCK DIAGRAM NO.	LOCATION	DESCRIPTION
10	IC 5 PIN 10	EXCESSIVE OVERRANGE
11	Q13 COLL.	OVERRANGE
12	IC 5 PIN 9	EXCESSIVE OVERRANGE
13	Q 12 COLL.	OVERRANGE
14	IC 6 PIN 8	CONTROL FLIP-FLOP
16	IC 5 PIN 8	OVERRANGE
17 -IN 18 +IN	IC 8 PIN 10 IC 8 PIN 11	ZERO DETECTOR
17 +IN 18 -IN	IC 8 PIN 10 IC 8 PIN 11	ZERO DETECTOR
19	IC 6 PIN 9	CONTROL FLIP-FLOP
21	IC 8 PIN 4	DATA TRANSFER



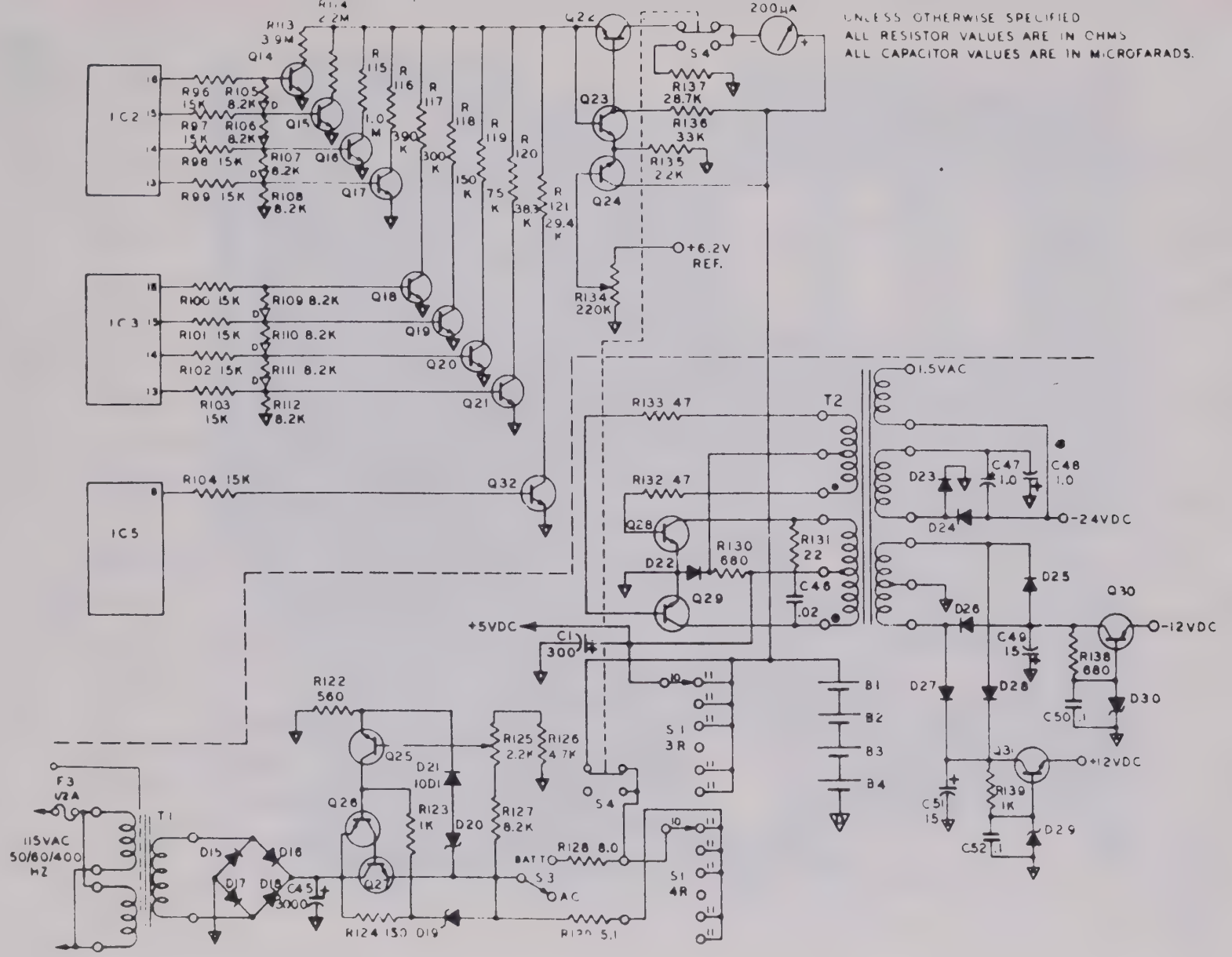
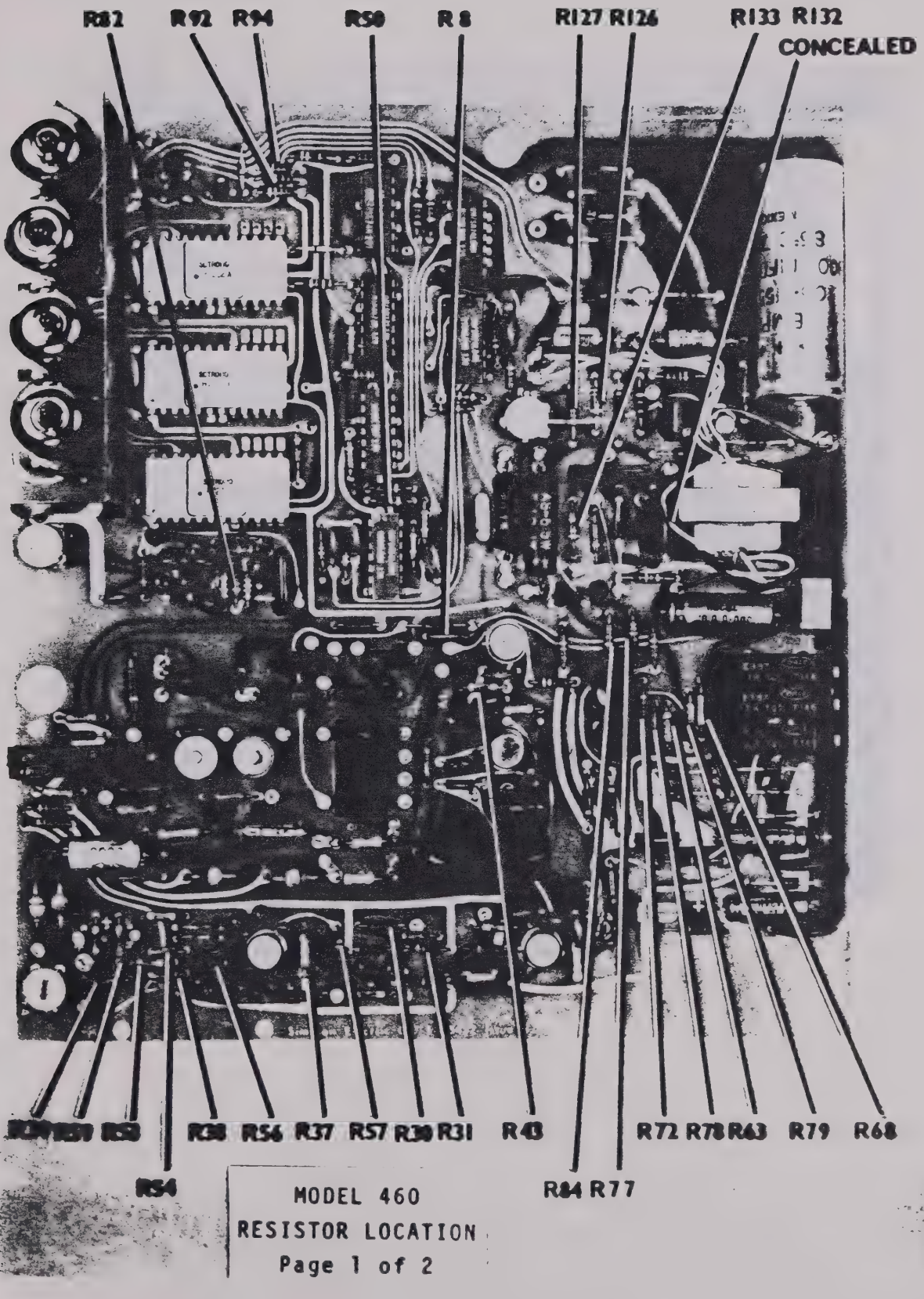
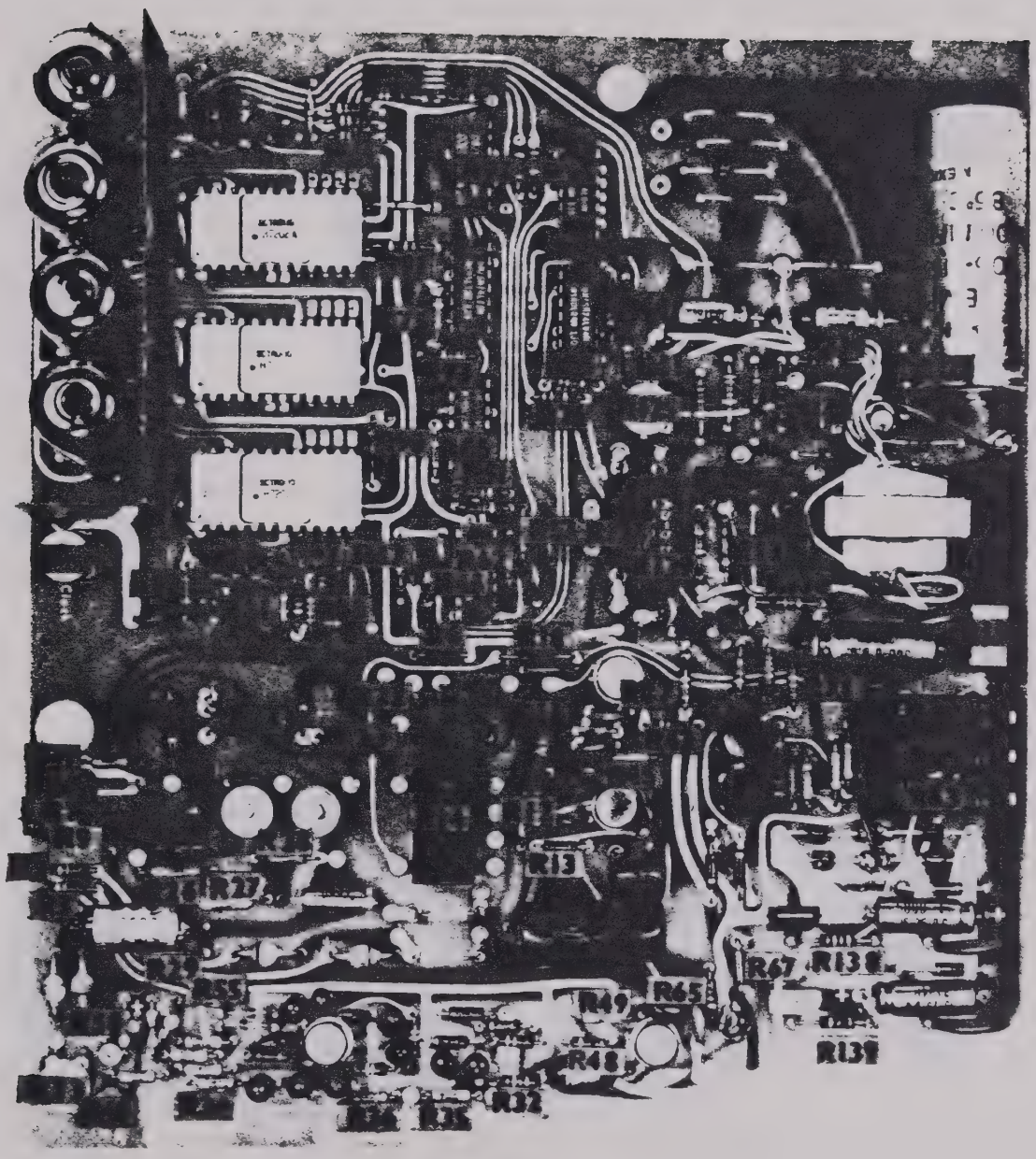


Figure 7 - Power Supply and D/A Converter

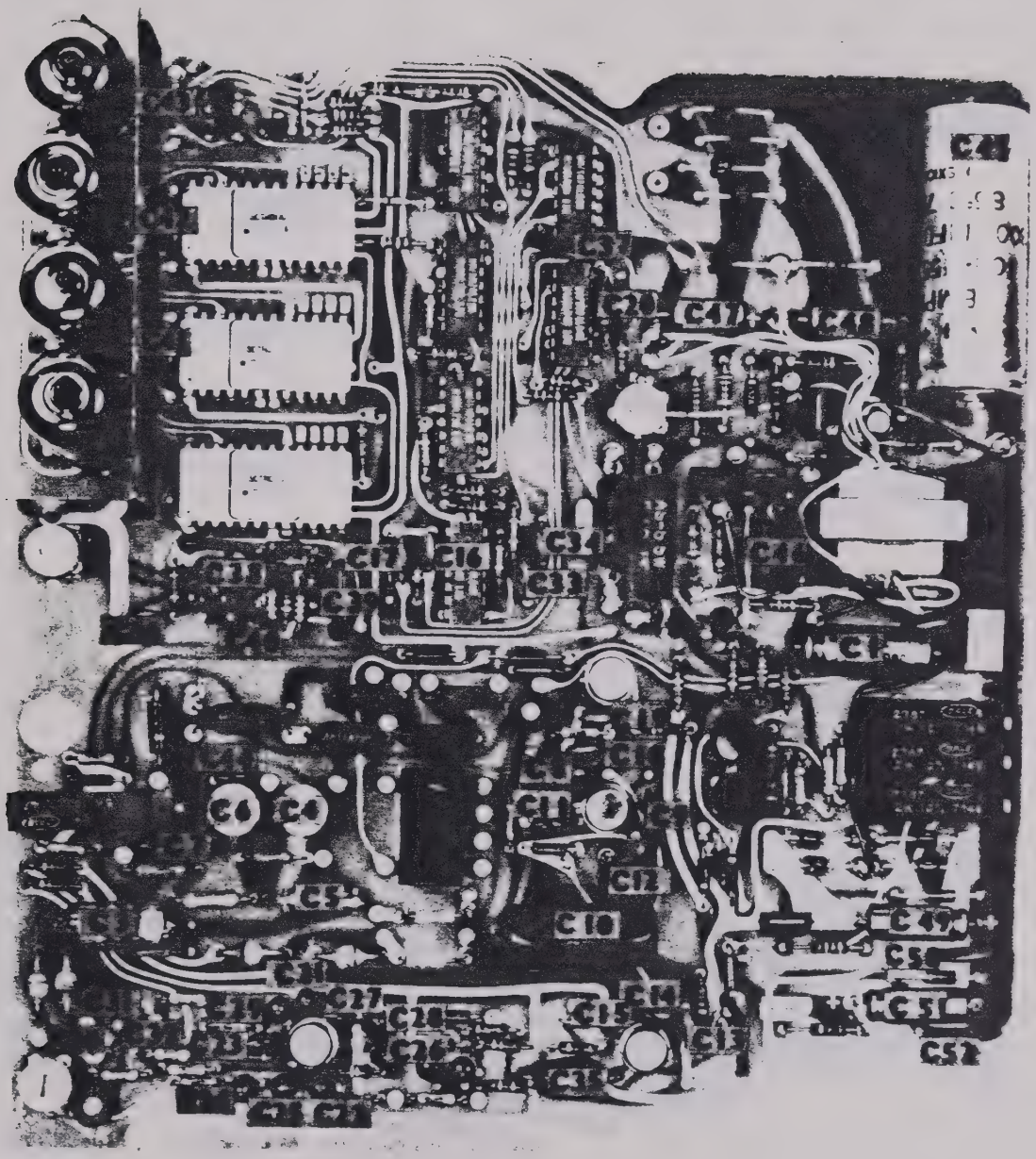


MODEL 460
RESISTOR LOCATION
Page 1 of 2

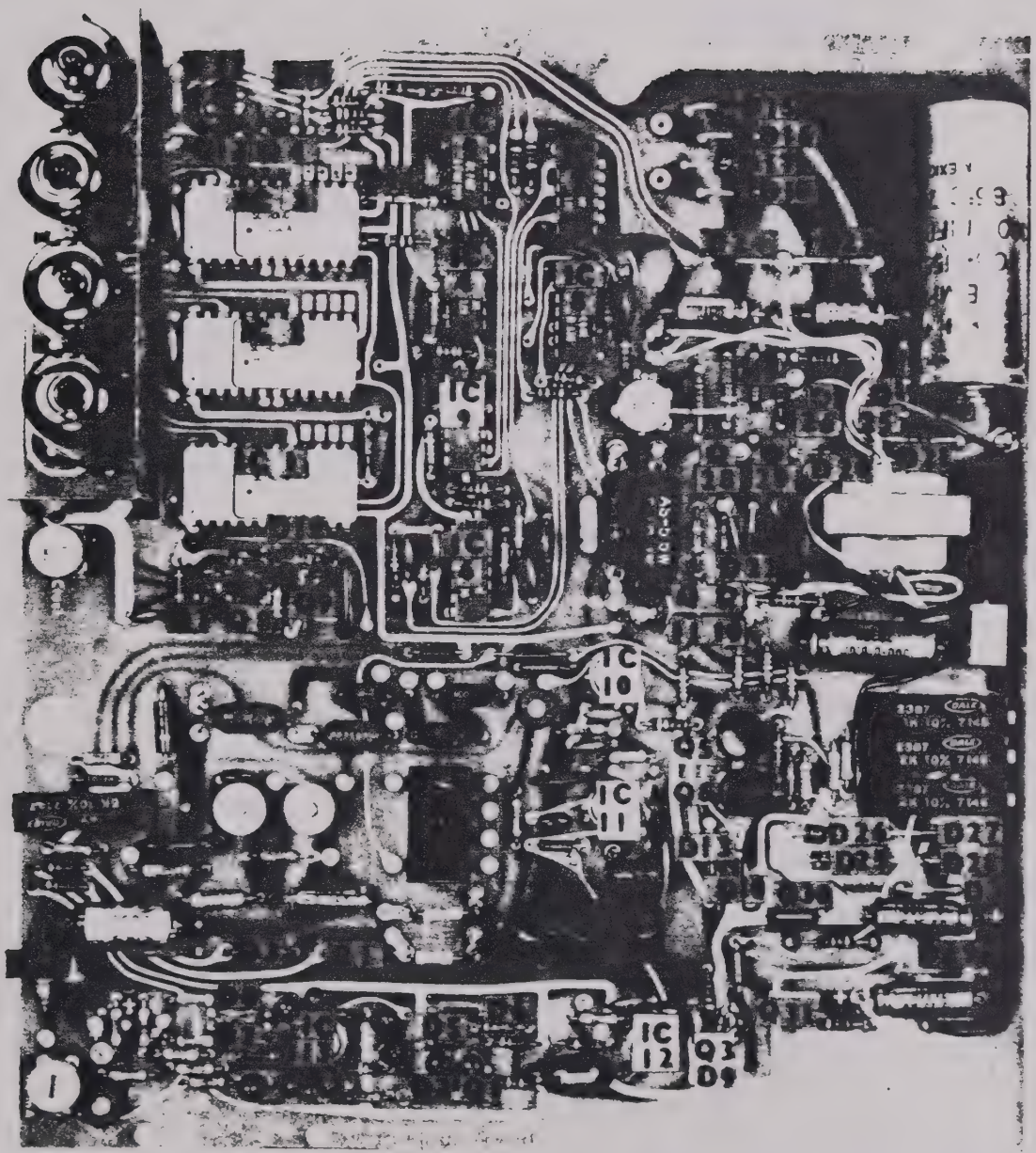


MODEL 460

RESISTOR LOCATION



MODEL 460
CAPACITOR LOCATION



MODEL 460
IC, DIODE & TRANSISTOR
PARTS LOCATION

Simpson
INSTRUMENTS THAT STAY ACCURATE
CUSTOMER SERVICE

853 Dundee Avenue
Elgin, Illinois 60120
(312) 697-2260 Telex 72-2422

Pride in Service
NASM MEMBER

SERVICE LETTER
#16-79

DATE: July 27, 1979

TO: All Authorized Service Centers and Representatives

SUBJECT: 460-1 Readout Display

Notice has been given to us by the vendor that they can no longer supply the following parts:

10-862469 M-460-1 Readout Assembly
05-115413 Numerical Readout Tube DT1707B
05-115414 Numerical Readout Tube DT1704B
05-115415 Numerical Readout Tube DT1705D

Orders for these four items from the Centers have been filled and shipped 07-25-79. Upon vendor's notice of their zero stock and that they do not intend to run more, we can no longer accept orders for the above items.

If any Center has a customer with an original 1970-1973 460-1 repair, I would advise sending the unit to the factory. We will continue to service the 460-1 for as long as we have parts except for readout tubes which we can do nothing about. We have not yet found another supplier but will advise you if we do.

Roy E. Fox
National Service Manager

REF:rd

RECEIVED
SEP 24 1979
SIMPSON-MONROVIA

SIMPSON ELECTRIC COMPANY
853 DUNDEE AVENUE
ELGIN, ILLINOIS 60120
PHONE 697-2260

STOCK PARTS

SIMPSON M-460 DIGITAL VOM

PART NUMBER	DESCRIPTION
	TESTER SECTION M-460*
10-862465	SWITCH ASSEMBLY, RANGE
10-862474	BOARD P.C. ASSEMBLY MAIN M-460
10-862465	SWITCH ASSEMBLY, FUNCTION
05-115474	I.C., SCTR0110 IC1 IC2 IC3
05-115449	SWITCH, FUNCTION, S1
05-115448	SWITCH, RANGE, S2
05-115473	I.C., SN74L73N IC4 IC9
05-115506	RES, 100K OHMS, R15
05-115526	RES, 90.0K OHMS, R5
05-115473	I.C., SN74L74N IC5
05-111408	RES, 100K OHMS, R4
05-111408	RES, 100K OHMS, R1
05-115471	I.C., SN74L00N IC6 IC7
05-115529	CAP, .1UF OHMS, C2
05-115469	I.C., SN74L04N IC8
05-115468	I C LM308H IC11
05-115470	I.C., LM710CH IC10
05-115467	I.C., TOA8709V IC12 IC13
05-113035	TRANS, TD101 Q5
05-115478	TRANS, TD401 Q6
05-115479	TRANS, D40D1 Q31
05-115480	TRANS, D41D1 Q26 Q30
05-115481	TRANS, 2N4921 Q28 Q29
05-112631	TRANS, MPS3394 Q3 Q11
05-113864	TRANS, MPS3702 Q4 Q10 Q12 Q13
05-113193	TRANS, 2N4274 Q7 Q8 Q9
05-115482	TRANS, EN2222 Q25
05-115484	TRANS, 2N4248 Q2
05-115483	TRANS, LS5458 Q1
05-112726	DIODE, 1N4743A D29 D30
05-111638	DIODE, 1N752A D19
05-112721	DIODE, 1N825A D10 D13
05-113197	DIODE, 1N751A D20
05-115476	DIODE, 1N750A D12
05-114005	DIODE, 10D1 D15 D16 D17 D18 D21
05-114005	DIODE, 10D1 D22 D23 D24 D25 D26
05-114005	DIODE, 10D1 D27 D28
05-115475	DIODE, A15F D1 D2 D3 D4
05-114946	DIODE, 1N456A D5 D6
05-112004	DIODE, 1N914 D9 D11 D14
05-115582	RES, VOLTAGE DIVIDER, R14

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STOCK PARTS

SIMPSON M-460 DIGITAL VOM

PART NUMBER	DESCRIPTION
05-115574	RES, 0.1 OHMS, * R24
05-115487	RES, 10 OHMS, R10
05-115488	RES, 510 OHMS, R39
05-115489	RES, 1K OHMS, R29
05-115490	RES, 1K OHMS, R49
05-115491	RES, 2K OHMS, R9
05-115494	RES, 8.45K OHMS, R34
05-115492	RES, 9.00K OHMS, R28
05-115493	RES, 9.96K OHMS, R36
05-115495	RES, 14.3K OHMS, R68 R79
05-115496	RES, 17.6K OHMS, R12
05-115497	RES, 90.0K OHMS, R35
05-115498	RES, 495K OHMS, R26 R27
05-115499	RES, 825 OHMS, R63 R78
05-115500	RES, 2.00K OHMS, R11
05-115501	RES, 4.7K OHMS, R126
05-115502	RES, 4.99K OHMS, R6 R8
05-115504	RES, 5.76K OHMS, R67
05-115503	RES, 8.2K OHMS, R127
05-114962	RES, 10.0K OHMS, R38 R43 R45
05-114962	RES, 10.0K OHMS, R54 R55
05-115505	RES, 30.1K OHMS, R53 R58 R59
05-115506	RES, 100K OHMS, R13
05-115507	RES, 5.1K OHMS, R129
05-115508	RES, 8.0 OHMS, R128
05-115509	RES, 22 OHMS, R90
05-114967	RES, 47 OHMS, R132 R133
05-115510	RES, 150 OHMS, R41 R134
05-115511	RES, 560 OHMS, R122
05-113869	RES, 680 OHMS, R130 R138
05-113871	RES, 1K OHMS, R123 R139
05-113872	RES, 1.5K OHMS, R42 R48 R56
05-113625	RES, 2.2K OHMS, R74 R75 R86
05-114973	RES, 3.3K OHMS, R73 R76 R81 R85
05-114973	RES, 3.3K OHMS, R89 R91
05-114976	RES, 6.8K OHMS, R32
05-114977	RES, 8.2K OHMS, R52 R62 R70 R93
05-114977	RES, 8.2K OHMS, R95
05-113624	RES, 10K OHMS, R60
05-114977	RES, 12K OHMS, R44 R71 R72 R82
05-114977	RES, 12K OHMS, R84 R87
05-115512	RES, 18K OHMS, R77
05-113623	RES, 22K OHMS, R2 R3 R31 R65
05-113875	RES, 33K OHMS, R69 R88

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STOCK PARTS

SIMPSON M-460 DIGITAL VOM

PART NUMBER	DESCRIPTION
05-115513	RES, 56K OHMS, *R46 R47 R50 R51
05-115513	RES, 56K OHMS, R61 R92 R94
05-115514	RES, 100K OHMS, R37 R57
01-117538	RES, 1M OHMS, R17
05-115655	RES, 8.2M OHMS, R18
05-115516	POT, 100 OHMS, R40
05-116474	POT, 1K OHMS, R16
05-115518	POT, 1K OHMS, R66
05-115521	POT, 1K OHMS, R33
05-115519	POT, 2K OHMS, R64 R83
05-115522	POT, 2.2K OHMS, R125
05-115520	POT, 5K OHMS, R7
05-115523	POT, 22K OHMS, R80
05-115524	POT, 1M OHMS, R19
05-115539	CAP, 6PF C7
05-115165	CAP, 10PF C7
05-114990	CAP, 22PF C14
05-115820	CAP, 39PF C23
05-115541	CAP, 91PF C11
05-115542	CAP, 510PF C38 C39
05-113612	CAP, 1UF C12
05-115532	CAP, 1.8UF C10
05-113217	CAP, 100PF C18
05-113216	CAP, 250PF C33
05-113985	CAP, 2500PF C20
05-111119	CAP, .001UF C16 C17 C34 C36
05-113215	CAP, .01UF C13 C15 C19 C41 C42
05-113215	CAP, .01UF C43
01-110652	CAP, .02UF C37 C46
05-114521	CAP, .1UF C8 C9 C50 C52
05-115530	CAP, 47UF C30
05-115531	CAP, 1UF C31
05-115533	CAP, 2.2UF C32
05-115534	CAP, 15UF C21 C22 C24 C25 C26
05-115534	CAP, 15UF C28 C29 C40
05-115532	CAP, 1UF C47 C48
05-115536	CAP, 15UF C49 C51
05-115537	CAP, 300UF C1
05-115538	CAP, 3000UF C45
05-115528	CAP, 2-8PF C6
05-115527	CAP, 15-60PF C4
05-115556	TRANSFORMER, T2
05-111459	CONNECTOR, PIN TERMINAL
05-115555	TUBE SOCKET 10 PIN,

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SIMPSON M-460 DIGITAL VOM

PART NUMBER	DESCRIPTION
03-811929	TUBE SHIELD,
05-115006	SPACER,
05-115525	RES, 49.9K OHMS, R30
05-115575	RES, 0.9 OHMS, R23
05-115576	RES, 9.0 OHMS, R22
05-115577	RES, 90.0 OHMS, R21
05-115578	RES, 900 OHMS, R20
05-115774	DIODE, MS8311 D7 D8
05-115164	CAP, 5PF C44
05-115821	CAP, 450PF C5
05-115775	CAP, 3300PF C35
05-115776	CAP, 5000PF C3

METER SECTION M-460

10-862468	BOARD, P.C. ASSEMBLY
05-115419	TRANS, 2N5172 Q14 Q15 Q16 Q17
05-115419	TRANS, 2N5172 Q18 Q19 Q20 Q21
05-115419	TRANS, 2N5172 Q22 Q32
05-112631	TRANS, MPS3394 Q23 Q24
05-113621	RES, 15K OHMS, R96 R97 R98 R99
05-113621	RES, 15K OHMS, R100 R101 R102
05-113621	RES, 15K OHMS, R103 R104
05-114977	RES, 8.2K OHMS, R105 R106 R107
05-114977	RES, 8.2K OHMS, R108 R109 R110
05-114977	RES, 8.2K OHMS, R111 R112
05-115442	RES, 3.9M OHMS, R113
05-115441	RES, 2.2M OHMS, R114
05-113626	RES, 1.0M OHMS, R115
05-115440	RES, 390K OHMS, R116
05-115439	RES, 300K OHMS, R117
05-115438	RES, 150K OHMS, R118
05-115437	RES, 75K OHMS, R119
05-115445	RES, 38.3K OHMS, R120
05-115444	RES, 29.4K OHMS, R121
05-113875	RES, 33K OHMS, R136
05-113623	RES, 22K OHMS, R135
05-115443	RES, 28.7K OHMS, R137
05-115446	POT, 220K OHMS, R134
10-862468	REPLACEMENT METER M-460
03-320191	COVER ASSEMBLY
10-740024	BRIDGE ASSEMBLY TOP
10-740025	BRIDGE ASSEMBLY BOTTOM
10-293308	ARMATURE APG 21-19 M-460

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PART NUMBER	DESCRIPTION
03-160056	MOVEMENT TERMINAL
01-114540	SPACERS
10-400188	BASE ASSEMBLY
03-708941	DIAL, PRINTED M-460
03-210305	DIAL, BLANK
	CHASSIS, ASSEMBLY,BATTERY SHELF
10-862482	CHASSIS, ASSEMBLY,BATTERY SHELF
05-495551	CHASSIS, BATTERY SHELF,
05-115706	HEATSINK, TRANSISTOR,
05-115580	BATTERY HOLDER, 4 D CELLS
05-115545	SWITCH, SLIDE, S3
05-115581	FUSEHOLDER,
05-115421	TRANSFORMER, POWER, T1
05-115709	TRANSISTOR, D44C2, Q27
01-185660	SCREW, 6-32X5/16 BINDING HD.
01-184089	SCREW, 6-32X1 BINDING HD
01-181866	WASHER, LOCK, #6
05-115708	SCREW, 6-32X1/2 NYLON RD. HD.
01-182655	NUT, HEX, 6-32X5/16 A.F. BRASS
01-182381	SCREW, 6-32X3/16 BRASS RD. HD.
05-115412	LABEL, BATTERY
05-115707	SPACER, FIBRE,
05-115717	NUT, HEX, 6-32X5/16 A.F. NYLON
	HOOD AND CHASSIS ASSEMBLY
10-862470	HOOD AND CHASSIS ASSEMBLY
05-306570	HOOD, CHASSIS,
05-306569	HANDLE, BAIL,
05-306568	STUD, MOUNTING, HANDLE,
05-116618	WASHER, FLAT, BLACK NYLON
05-116619	WASHER, SPRING STEEL,
05-112848	HANDLE,
05-112841	BUMPER, RUBBER, HANDLE
01-131557	WASHER, FLAT
01-131541	NUT, HEX, 10-32X3/32X3/8 BRASS
05-305549	KNOB,HANDLELOCK
	MISCELLANEOUS ITEMS, M-460
05-115414	TUBE, READOUT, D54
05-115415	TUBE, READOUT, D52 D53

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PART NUMBER	DESCRIPTION
05-115413	TUBE, READOUT, .01
05-115485	FUSE, PICO, 1/8A, 125V, F1
05-115486	FUSE, PICO, 3A, 125V, F2
05-275450	COVER CORD STORAGE
05-113480	BUMPER, RUBBER FEET, BOTTOM
01-132176	SCREW, 6X1/2 SLOTTED BINDING HD.
01-117829	BUMPER, RUBBER FEET, REAR
01-187498	SCREW, 6X3/8 PHILLIPS ROUND HD
05-115416	CONNECTOR, BANANA JACK, BLACK
05-155424	SCREW, 6-32X1/4 PHILLIPS TRUSS
05-115599	PAPER TUBING, BATTERY INSULATOR
05-115598	RUBBER BAND, 3X1/16 W X1/32 THK.
05-145990	SCREW, SPECIAL 6-32X1/4 PHILLIPS
05-495568	BRACKET, RIGHT P.C. BOARD MTG.
05-495569	BRACKET, LEFT P.C. BOARD MTG.
05-305417	WINDOW, CONTROL PANEL
05-115420	HOLDER, P.C. BOARD, NYLON
05-115418	PANEL, CONTROL
05-114854	CONNECTOR, BANANA JACK, RED
05-114855	CONNECTOR, BANANA JACK, BLACK
05-185425	SCREW, 2-56X1/4 PHILLIPS PAN HD.
05-185426	SCREW, 3-48X1/4 PHILLIPS FILL.HD
05-115427	SCREW, 4-40X1 PHILLIPS FLAT HD
01-187499	WASHER, FLAT, #6 STEEL
01-182655	NUT, HEX, 6-32X5/16 A.F. BRASS
05-110702	CLAMP, CABLE,
01-110614	CORD, POWER
05-115588	SWITCH, PUSHBUTTON, S4
01-131506	SCREW, 6-32X3/8 FLAT HD
03-811903	HOLDER, LEAD STORAGE,
01-404026	LOCKWASHER, 3/8 I.D.X 1/20 O.D.
01-261543	NUT, HEX 3/8-32X1/2 A.F. STEEL
05-115583	KNOB, ROUND.
01-113233	FUSE, 1/2A, 3AG, F3
05-114334	WIRE TIE, NYLON

MANUAL SHIPPING ITEMS, M-460

05-115570	MANUAL, INSTRUCTION M-460
05-113283	BAG, PLASTIC, 14X8X.022 M-460
05-115613	CARTON, SHIPPING, M-460
05-115614	FOAM FILLERS, M-460
05-115571	LABEL, IDENTIFICATION, M-460

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STOCK PARTS

SIMPSON M-460 DIGITAL VOM

PART NUMBER	DESCRIPTION
	DIST. STK. ACCESSORY ITEMS M-460
10-830115	*INDEX NO 00115 LEAD, TEST
05-115830	*INDEX NO 01614 CASE, CARRYING
10-830393	*INDEX NO 00159 PROBE, H.V.

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DIGITAL/OSCILLOSCOPE/SPECIAL PRODUCTS

MODEL 460 D.M.M. 1971-73

PART NUMBER	DESCRIPTION
	TESTER SECTION M-460*
10-862474	BOARD P.C. ASSEMBLY MAIN M-460
10-862465	SWITCH ASSEMBLY, FUNCTION
10-862465	SWITCH ASSEMBLY, RANGE
05-115474	I.C., SCTR0110 IC1 IC2 IC3
05-115449	SWITCH, FUNCTION, S1
05-115448	SWITCH, RANGE, S2
05-115473	I.C., SN74L73N IC4 IC9
05-115506	RES, 100K OHMS, R15
05-115526	RES, 90.0K OHMS, R5
05-115473	I.C., SN74L74N IC5
05-111408	RES, 100K OHMS, R1
05-111408	RES, 100K OHMS, R4
05-115471	I.C., SN74L00N IC6 IC7
05-115529	CAP, .1UF OHMS, C2
05-115469	I.C., SN74L04N IC8
05-115468	I C LM308H IC11
05-115470	I.C., LM710CH IC10
05-115467	I.C., T0A8709V IC12 IC13
05-113035	TRANS, TD101 Q5
05-115478	TRANS, TD401 Q6
05-115479	TRANS, D40D1 Q31
05-115480	TRANS, D41D1 Q26 Q30
05-115481	TRANS, 2N4921 Q28 Q29
05-112631	TRANS, MPS3394 Q3 Q11
05-113864	TRANS, MPS3702 Q4 Q10 Q12 Q13
05-113193	TRANS, 2N4274 Q7 Q8 Q9
05-115482	TRANS, EN2222 Q25
05-115484	TRANS, 2N4248 Q2
05-115483	TRANS, LS5458 Q1
05-112726	DIODE, 1N4743A D29 D30
05-111638	DIODE, 1N752A D19
05-112721	DIODE, 1N825A D10 D13
05-113197	DIODE, 1N751A D20
05-115476	DIODE, 1N750A D12
05-114005	DIODE, 10D1 D15 D16 D17 D18 D21
05-114005	DIODE, 10D1 D22 D23 D24 D25 D26
05-114005	DIODE, 10D1 D27 D28
05-115475	DIODE, A15F D1 D2 D3 D4
05-114946	DIODE, 1N456A D5 D6
05-112004	DIODE, 1N914 D9 D11 D14
05-115582	RES, VOLTAGE DIVIDER, R14

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MODEL 460 D.M.M. 1971-73

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05-115574	RES, 0.1 OHMS, R24*
05-115487	RES, 10 OHMS, R10
05-115488	RES, 510 OHMS, R39
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05-115494	RES, 8.45K OHMS, R34
05-115492	RES, 9.00K OHMS, R28
05-115493	RES, 9.96K OHMS, R36
05-115495	RES, 14.3K OHMS, R68 R79
05-115496	RES, 17.6K OHMS, R12
05-115497	RES, 90.0K OHMS, R35
05-115498	RES, 495K OHMS, R26 R27
05-115499	RES, 825 OHMS, R63 R78
05-115500	RES, 2.00K OHMS, R11
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05-115502	RES, 4.99K OHMS, R6 R8
05-115504	RES, 5.76K OHMS, R67
05-115503	RES, 8.2K OHMS, R127
05-114962	RES, 10.0K OHMS, R38 R43 R45
05-114962	RES, 10.0K OHMS, R54 R55
05-115505	RES, 30.1K OHMS, R53 R58 R59
05-115506	RES, 100K OHMS, R13
05-115507	RES, 5.1K OHMS, R129
05-115508	RES, 8.0 OHMS, R128
05-115509	RES, 22 OHMS, R90
05-114967	RES, 47 OHMS, R132 R133
05-115510	RES, 150 OHMS, R41 R134
05-115511	RES, 560 OHMS, R122
05-113869	RES, 680 OHMS, R130 R138
05-113871	RES, 1K OHMS, R123 R139
05-113872	RES, 1.5K OHMS, R42 R48 R56
05-113625	RES, 2.2K OHMS, R74 R75 R86
05-114973	RES, 3.3K OHMS, R73 R76 R81 R85
05-114973	RES, 3.3K OHMS, R89 R91
05-114976	RES, 6.8K OHMS, R32
05-114977	RES, 8.2K OHMS, R52 R62 R70 R93
05-114977	RES, 8.2K OHMS, R95
05-113624	RES, 10K OHMS, R60
05-114977	RES, 12K OHMS, R44 R71 R72 R82
05-114977	RES, 12K OHMS, R84 R87
05-115512	RES, 18K OHMS, R77
05-113623	RES, 22K OHMS, R2 R3 R31 R65
05-113875	RES, 33K OHMS, R69 R88

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DIGITAL/OSCILLOSCOPE/SPECIAL PRODUCTS

MODEL 460 D.M.M. 1971-73

PART NUMBER	DESCRIPTION
05-115513	RES, 56K OHMS, R46 R47 R50 R51
05-115513	RES, 56K OHMS, R61 R92 R94
05-115514	RES, 100K OHMS, R37 R57
01-117538	RES, 1M OHMS, R17
05-115655	RES, 8.2M OHMS, R18
05-115516	POT, 100 OHMS, R40
05-116474	POT, 1K OHMS, R16
05-115518	POT, 1K OHMS, R66
05-115521	POT, 1K OHMS, R33
05-115519	POT, 2K OHMS, R64 R83
05-115522	POT, 2.2K OHMS, R125
05-115520	POT, 5K OHMS, R7
05-115523	POT, 22K OHMS, R80
05-115524	POT, 1M OHMS, R19
05-115539	CAP, 6PF C7
05-115165	CAP, 10PF C7
05-114990	CAP, 22PF C14
05-115820	CAP, 39PF C23
05-115541	CAP, 91PF C11
05-115542	CAP, 510PF C38 C39
05-113612	CAP, 1UF C12
05-115532	CAP, 1.8UF C10
05-113217	CAP, 100PF C18
05-113216	CAP, 250PF C33
05-113985	CAP, 2500PF C20
05-111119	CAP, .001UF C16 C17 C34 C36
05-113215	CAP, .01UF C13 C15 C19 C41 C42
05-113215	CAP, .01UF C43
01-110652	CAP, .02UF C37 C46
05-114521	CAP, .1UF C8 C9 C50 C52
05-115530	CAP, 47UF C30
05-115531	CAP, 1UF C31
05-115533	CAP, 2.2UF C32
05-115534	CAP, 15UF C21 C22 C24 C25 C26
05-115534	CAP, 15UF C28 C29 C40
05-115532	CAP, 1UF C47 C48
05-115536	CAP, 15UF C49 C51
05-115537	CAP, 300UF C1
05-115538	CAP, 3000UF C45
05-115528	CAP, 2-8PF C6
05-115527	CAP, 15-60PF C4
05-115556	TRANSFORMER, T2
05-111459	CONNECTOR, PIN TERMINAL
05-115555	TUBE SOCKET 10 PIN,

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MODEL 460 D.M.M. 1971-73

PA

PART NUMBER	DESCRIPTION
03-811929	TUBE SHIELD,
05-115006	SPACER,
05-115525	RES. 49.9K OHMS. R30
05-115575	RES, 0.9 OHMS, R23
05-115576	RES, 9.0 OHMS, R22
05-115577	RES, 90.0 OHMS, R21
05-115578	RES, 900 OHMS, R20
05-115774	DIODE, MS8311 D7 D8
05-115164	CAP, 5PF C44
05-115821	CAP. 450PF C5
05-115775	CAP, 3300PF C35
05-115776	CAP, 5000PF C3

METER SECTION M-460

10-862468	BOARD, P.C. ASSEMBLY
05-115419	TRANS, 2N5172 Q14 Q15 Q16 Q17
05-115419	TRANS, 2N5172 Q18 Q19 Q20 Q21
05-115419	TRANS. 2N5172 Q22 Q32
05-112631	TRANS, MPS3394 Q23 Q24
05-113621	RES, 15K OHMS, R96 R97 R98 R99
05-113621	RES, 15K OHMS, R100 R101 R102
05-113621	RES. 15K OHMS. R103 R104
05-114977	RES, 8.2K OHMS, R105 R106 R107
05-114977	RES, 8.2K OHMS, R108 R109 R110
05-114977	RES, 8.2K OHMS, R111 R112
05-115442	RES. 3.9M OHMS, R113
05-115441	RES, 2.2M OHMS, R114
05-113626	RES, 1.0M OHMS, R115
05-115440	RES, 390K OHMS. R116
05-115439	RES, 300K OHMS, R117
05-115438	RES, 150K OHMS, R118
05-115437	RES, 75K OHMS, R119
05-115445	RES. 38.3K OHMS. R120
05-115444	RES, 29.4K OHMS. R121
05-113875	RES, 33K OHMS, R136
05-113623	RES, 22K OHMS, R135
05-115443	RES. 28.7K OHMS. R137
05-115446	POT, 220K OHMS, R134
10-862468	REPLACEMENT METER M-460
03-320191	COVER ASSEMBLY
10-740024	BRIDGE ASSEMBLY TOP
10-740025	BRIDGE ASSEMBLY BOTTOM
10-293308	ARMATURE APG 21-19 M-460

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DIGITAL/OSCILLOSCOPE/SPECIAL PRODUCTS

MODEL 460 D.M.M. 1971-73

PART NUMBER	DESCRIPTION
03-160056	MOVEMENT TERMINAL
01-114540	SPACERS *
10-400188	BASE ASSEMBLY
03-708941	DIAL, PRINTED M-460
03-210305	DIAL, BLANK
	CHASSIS, ASSEMBLY,BATTERY SHELF
10-862482	CHASSIS, ASSEMBLY,BATTERY SHELF
05-495551	CHASSIS, BATTERY SHELF,
05-115706	HEATSINK, TRANSISTOR,
05-115580	BATTERY HOLDER, 4 D CELLS
05-115545	SWITCH, SLIDE, S3
05-115581	FUSEHOLDER,
05-115421	TRANSFORMER, POWER, T1
05-115709	TRANSISTOR, D44C2, Q27
01-185660	SCREW, 6-32X5/16 BINDING HD.
01-184089	SCREW, 6-32X1 BINDING HD
01-181866	WASHER, LOCK, #6
05-115708	SCREW, 6-32X1/2 NYLON RD. HD.
01-182655	NUT, HEX, 6-32X5/16 A.F. BRASS
01-182381	SCREW, 6-32X3/16 BRASS RD. HD.
05-115412	LABEL, BATTERY
05-115707	SPACER, FIBRE,
05-115717	NUT, HEX, 6-32X5/16 A.F. NYLON
	HOOD AND CHASSIS ASSEMBLY
10-862470	HOOD AND CHASSIS ASSEMBLY
05-306570	HOOD, CHASSIS,
05-306569	HANDLE, BAIL,
05-306568	STUD, MOUNTING, HANDLE,
05-116618	WASHER, FLAT, BLACK NYLON
05-116619	WASHER, SPRING STEEL,
05-112848	HANDLE,
05-112841	BUMPER, RUBBER, HANDLE
01-131557	WASHER, FLAT
01-131541	NUT, HEX, 10-32X3/32X3/8 BRASS
05-305549	KNOB,HANDLELOCK
	MISCELLANEOUS ITEMS, M-460
05-115414	TUBE, READOUT, D54
05-115415	TUBE, READOUT, D52 D53

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MODEL 460 D.M.M. 1971-73

PA	PART NUMBER	DESCRIPTION
	05-115413	TUBE, READOUT, D1 *
	05-115485	FUSE, PICO, 1/8A, 125V, F1
	05-115482	FUSE, PICO, 3A, 125V, F2
	05-273459	CLOSE CORD STORAGE
	05-113486	BUMPER, RUBBER FEET, BOTTOM
	01-132176	SCREW, 6X1/2 SLOTTED BINDING HD.
	01-117823	BUMPER, RUBBER FEET, REAR
	01-187492	SCREW, 6X3/8 PHILLIPS ROUND HD
	05-115416	CONNECTOR, BANANA JACK, BLACK
	05-155424	SCREW, 8-32X1/4 PHILLIPS TRUSS
	05-115599	PAPER TUBING, BATTERY INSULATOR
	05-115599	RUBBER BAND, 3X1/16 W X1/32 THK.
	05-145990	SCREW, SPECIAL 6-32X1/4 PHILLIPS
	05-495568	BRACKET, RIGHT P.C. BOARD MTG.
	05-495569	BRACKET, LEFT P.C. BOARD MTG.
	05-305417	WINDOW, CONTROL PANEL
	05-115420	HOLDER, P.C. BOARD, NYLON
	05-115418	PANEL, CONTROL
	05-114854	CONNECTOR, BANANA JACK, RED
	05-114855	CONNECTOR, BANANA JACK, BLACK
	05-185425	SCREW, 2-56X1/4 PHILLIPS PAN HD.
	05-185426	SCREW, 3-48X1/4 PHILLIPS FILL.HD
	05-115427	SCREW, 4-40X1 PHILLIPS FLAT HD
	01-187499	WASHER, FLAT, #6 STEEL
	01-182655	NUT, HEX, 6-32X5/16 A.F. BRASS
	05-110702	CLAMP, CABLE,
	01-110614	CORD, POWER
	05-115589	SWITCH, PUSHBUTTON, S4
	01-131506	SCREW, 6-32X3/8 FLAT HD
	03-811903	HOLDER, LEAD STORAGE,
	01-404026	LOCKWASHER, 3/8 I.D.X 1/20 O.D.
	01-261543	NUT, HEX 3/8-32X1/2 A.F. STEEL
	05-115583	KNOB, ROUND,
	01-113233	FUSE, 1/2A, 3AG, F3
	05-114334	WIRE TIE, NYLON

MANUAL SHIPPING ITEMS, M-460

	05-115570	MANUAL, INSTRUCTION M-460
	05-113283	BAG, PLASTIC, 14X8X.022 M-460
	05-115613	CARTON, SHIPPING, M-460
	05-115614	FOAM FILLERS, M-460
	05-115571	LABEL, IDENTIFICATION, M-460

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MODEL 460 D.M.M. 1971-73

PART NUMBER	DESCRIPTION
10-830115	*INDEX NO 00115 LEAD, TEST
05-115830	*INDEX NO 01614 CASE, CARRYING
10-830393	*INDEX NO 00159 PROBE, H.V.

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